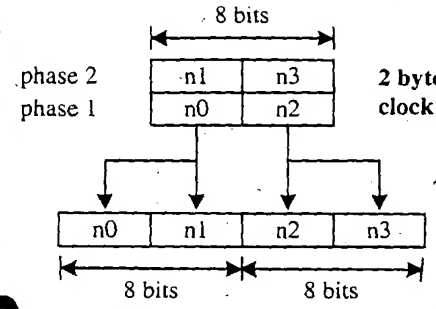

2 bytes of a codeword from memory, transferred in two clock phases.

2 bytes mapped to the inputs of the ECC block.

FIG. 1

100

In the first clock phase nibbles n0 and n2 are transferred and mapped to the first nibble of each of two symbols of the

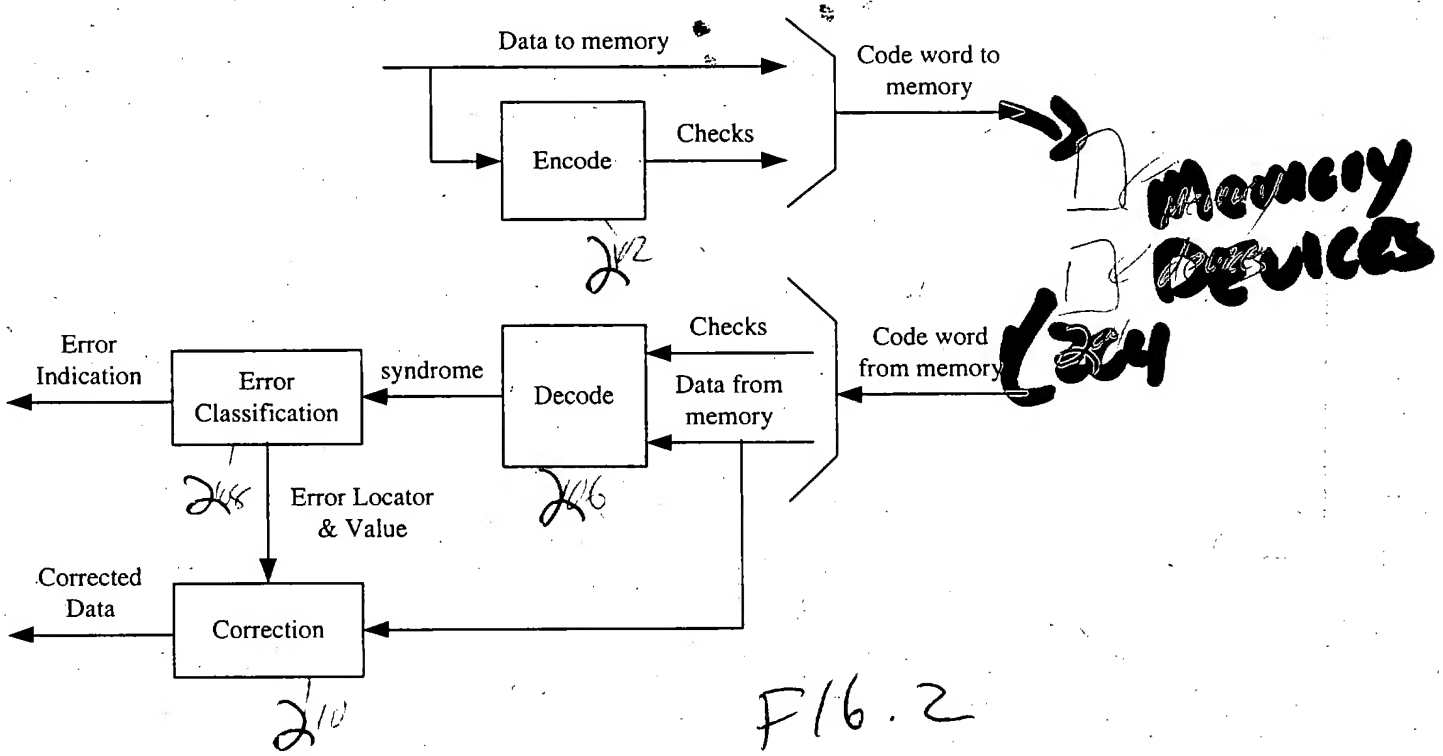
Data to memory
Code word to memory
Encode
Checks
Memory Devices
Checks
Code word from memory
Error Indication
Error Classification
syndrome
Decode
Data from memory
Error Locator & Value
Corrected Data
Correction

FIG. 2

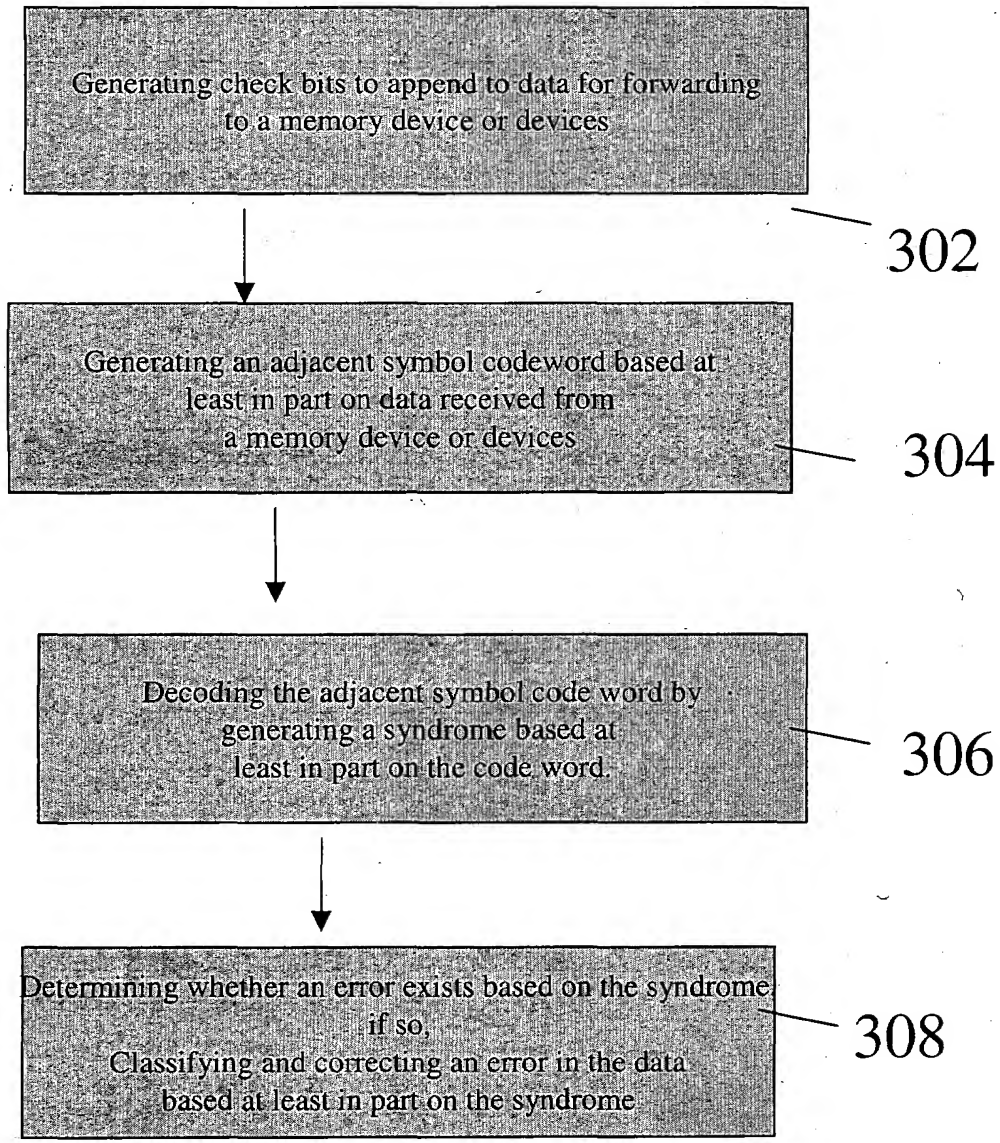
Generating check bits to append to data for forwarding to a memory device or devices
302
Generating an adjacent symbol codeword based at least in part on data received from a memory device or devices
304
Decoding the adjacent symbol code word by generating a syndrome based at least in part on the code word.
306
Determining whether an error exists based on the syndrome. if so,
Classifying and correcting an error in the data based at least in part on the syndrome
308

Figure 3

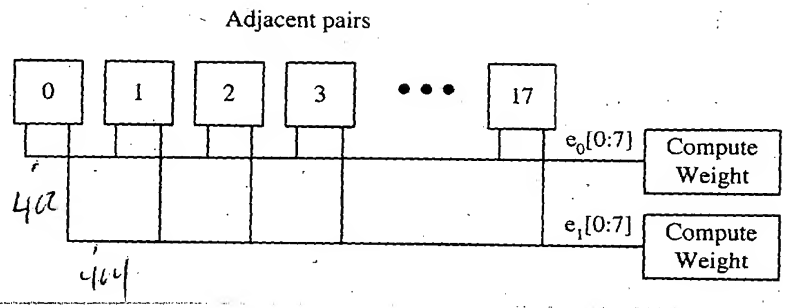
Adjacent pairs
0
1
2
3
17
$e_0[0:7]$
Compute Weight
$e_1[0:7]$
Compute Weight
402
404

FIGURE 4

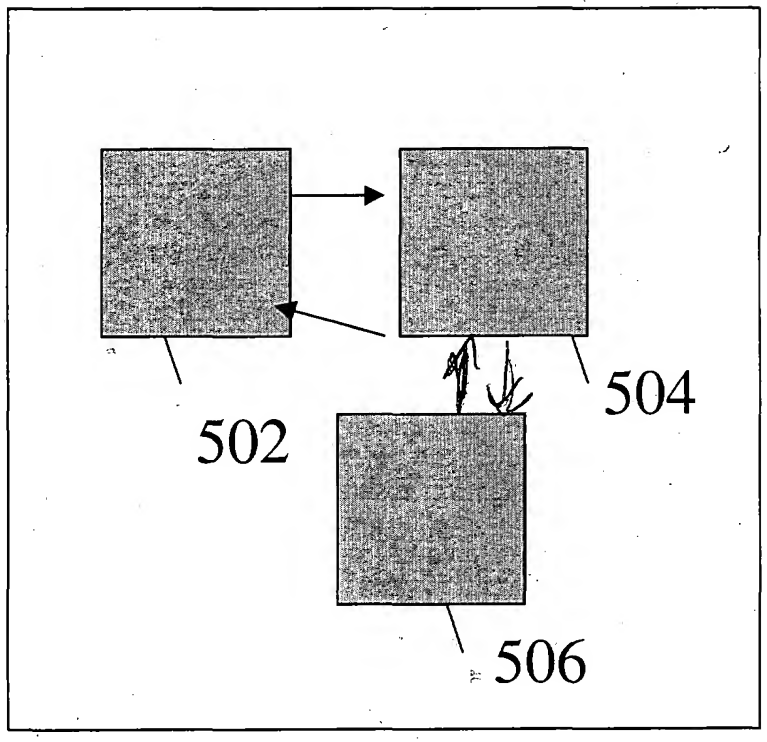

FIGURE 5